

L5 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:664317 CAPLUS
DOCUMENT NUMBER: 127:332736
TITLE: Electroconductive hydrolysis-resistant polyester compositions, monofilaments, industrial fabrics, and their manufacture
INVENTOR(S): Masuda, Toyohiko; Maeda, Yuhei; Horii, Kei; Kinoshita, Akira
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan; Toray Monofilament Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09263688	A2	19971007	JP 1996-73949	19960328
PRIORITY APPLN. INFO.:			JP 1996-73949	19960328

AB The compns. show sp. resistivity $\geq 10^8 \text{ OMEGA.-cm}$ and contain (A) polyesters having 5 equiv/106 g. ≥ 1 terminal group $\text{CO}_2\text{CH}_2\text{CH}(\text{OX})\text{R}$ and/or $\text{CO}_2\text{CH}_2\text{CH}(\text{OX})\text{CH}_2\text{OR}$ [R = H, (substituted) N-methylenephthalimide, C1-20 alkyl, (substituted) Ph, cycloalkyl; X = H, carbodiimide reaction residue]. (B) 0.005-1.5% unreacted carbodiimides, and (C) elec. conductors, preferably 4-15% carbon black. The compns. are manufd. by kneading polyesters with epoxides I and/or II (R = same as above) and elec. conductive carbon black, followed by kneading with carbodiimides. Their monofilaments and fabrics are also claimed. Thus, poly(butylene terephthalate), Denacol EX 731, and Ketjen EC (conductive carbon black) were kneaded at ratio 87:3:10 and temp. 275.degree., extruded, pelletized, kneaded with N,N'-di-2,6-diisopropylphenylcarbodiimide at ratio 100:1.5 and temp. 280.degree., spun, cooled in a 80.degree.-bath, drawn, and set to give a 0.4 mm diam. monofilament showing sp. resistivity 3.4 .times. 10^2 OMEGA.-cm .

IT Electric conductors
(carbon black; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Nonwoven fabrics
(core-sheath fiber for; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Polyester fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(core-sheath, bicomponent; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Carbon black, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Polyester fibers, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fabrics, with terminals modified with carbodiimides and epoxides; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Polyesters, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(reaction products, with N-glycidylphthalimide and N,N'-di-2,6-diisopropylphenylcarbodiimide; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT Polyester fibers, uses
Polyesters, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(with terminals modified with carbodiimides and epoxides; electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)

IT 2162-74-5DP, reaction products with poly(butylene terephthalate) and N-glycidylphthalimide 5455-98-1DP, reaction products with poly(butylene terephthalate) and N,N'-di-2,6-diisopropylphenylcarbodiimide 7144-65-2DP, reaction products with poly(butylene terephthalate) and N-glycidylphthalimide 24968-12-5DP, reaction products with N-glycidylphthalimide and N,N'-di-2,6-diisopropylphenylcarbodiimide 25038-59-9DP, reaction products with N-glycidylphthalimide and N,N'-di-2,6-diisopropylphenylcarbodiimide 26062-94-2DP, reaction products with N-glycidylphthalimide and N,N'-di-2,6-diisopropylphenylcarbodiimide 66027-02-9DP, reaction products with N-glycidylphthalimide and N,N'-di-2,6-diisopropylphenylcarbodiimide
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(electroconductive hydrolysis-resistant polyester compns. and monofilaments and industrial fabrics and their manuf.)